G R S IX 5]

Previous references

Dept

File No 2 - 19

1919-20

Serial Nos 1424

(Mun)

Later references

GENERAL AND REVENUE SECRETARIAT

Reserve

Serial Nos 1424

Part B for April 1921

SUBJECT

Estimates for works in the Bangalore city Municipality

8(1) From the President Bldr city Mun Cl
-523 Dy 28-6-1919

Submits for sanction plans and estimate for Construction the Kilchetty Chattram Road to the Bangalore City Railway Station across the Dharmambudhi Tank

8(24) To the President Bldr city Mun Cl
NO R 11662 Dy 6-9-21

O Abdur Rahman
30-7-21

Says that the work may be over till the financial Conditions improve

WD 1388—GPB—16,926—23-7-21

G R S III—1] 1919-20

GENERAL AND REVENUE SECRETARIAT

(Rel)

NOTES

File No 2-19

FILE HEADING

Estimate for works in the Bangalore city munty.

From

The President, Bangalore city town council

No 523/C 9 Dated 25 6 19 Received 1-7-19

Diary No 12	Enclos 9 Spare Copies	Serial No 1

BRIEF ABSTRACT OF LETTER

Submits for sanction a revised estimate with plans amounting to Rs 86,927/ for continuing the Kitchelly Chattram Road to the Bangalore city R'way Station thro' the amanbudi tank and lowering the said tank bund so as to improve the ventilation & sanitation of the drew Powers valor to the municipal garden.

NOTES AND ORDERS

J

In G O No 1821-3/Rel 94-16-619 dt 24th Sept 1917 an estimate amounting to Rs 57,245/- was sanctioned for continuing the Kitchelly Chattram Road to the Bangalore city R. Station

2 It is reported that owing to the scarcity

NOTES—First Sheet

WD 1262- GPB—20 000—18 11 19

R. S

General and Revenue Secretariat | Jul File No 2 of 1919

12

Serial No

and uncertainty of labour and to the steps
rapid rise in wages, the sanctioned
could not be worked out and the estimate
had to be revised

3 The revised estimate amounting
to Rs 86,927/- provides both for the road
in question as well as for lowering the
Dharmambedha Tank bund so as
more fresh air to and improve the sanitation
the draw of houses below the Mund garden
& make the approaches to the Tank Bund
shallower and the sharp side level and easy
The original estimate provided only for the
road

4 The revised estimate has been prepared
by the Executive Engr of Improvement Bk
in consultation with the Chief Engr as stated
in para 3 of the paper under disposal. So the estimate
need not, if approved, go to the Chief Engr for
vetting again as per standing orders

In the circumstances stated, draft
sanctioning the revised estimate is submitted
for appl or other orders

9/7

3.7.19 Rev Sec²

3/7

MC
3/7/19

6 This has become a very
expensive work, and the need for it
may perhaps be further scrutinized

MD
4/7/19

NOTE—Contn sheet

R. S III-2]

General and Revenue Secretariat.

12

of File No 2 of 1919

Serial No

7 Extract from the Dewan's orders on a departure note calling for the file re Shalamanbathe Track Road - Bungalow & Improvement work

I am not so sure of the Tank estimate. It seems to be an unnecessary luxury work being premature in cost. Chief Engr may be consulted & the Council (Amtd) A R B 5 7 19 all the votedpersons Hindi members

Approved the file with be referred A D to the Chief Engr for ascertaining the need for undertaking the work Cost

9/7 7 7 19 9. Forwarded with compliments to the Chief Engineer for favour of opinion

8/7

By order
[illegible]
for Secretary

8/7/19

0-5 of 19
9-7-19

Secy/Pwd
9 July
19

Form—Cloth sheet

P L-6

C. R. S 111-2]

General and Revenue Secretariat

2d File No 2 of 1919

Serial No

1370

Forwarded to the Revenue Secretary with reference to U.O. No. 5° dated 9/7/19

2. The sanctioned estimate amounting to Rs. 57,245 provided for laying out a direct road to the Railway station through the tank bed in continuation of the Kitchetty Chattram road.

3. The high tendered rates for earthwork for the work resulted in an excess of over 50 per cent on the sanctioned amount.

4. To reduce the cost of earthwork, it was then suggested that the level of the existing tank bun road be lowered by 4' or 5' and the earth be utilised for the proposed road embankment

5. This proposal by itself was often considered necessary for various reasons. Avoiding the - - existing awkward junction, with the Arlepet road, easing the present steep and inconvenient gradients of its approaches on all sides and affording better ventilation to the houses below the bund, are some of its principal features

6. When further considered side by side with the tank bed road estimate, the utility of the proposal seems beyond question. The original excess of Rs. 23,906 as obtained from the tendered rates reduces itself to Rs. 6,279 when the two proposals are combined and worked together,

NOTE—Contn sheet

WD A 1780—GPB—60,000—20-3 19—6.

G R S III-2]

General and Revenue Secretariat

Ind File No 2 of 1917

Serial No.

7. The estimate has therefore been now revised - in the light of the proposal made above and amounts to Rs. 86,927. It also makes a provision for laying out a park or recreation ground to the north of th new road

8. I went over the grounds personally in company with Mr. Thorè, Sanitary Engineer, and a deputatio of the members of the Improvement Trust Board and considered the question in detail. I feel no - doubt that the scheme as now combined will serve useful public purpose and therefore strongly re- commend it for sanction.

Bangalore
13th September 1919

for CHIEF ENGINEER OF MYSORE.

NOTE—Contn sheet

S III 2]

General and Revenue Secretariat

Rel File No 2 of 1919

Serial No

11. Submitted for orders with the ten- Hd Opinion of the Chief Engr as noted in para 7 ante from which he strongly de- commends the adoption of the combined scheme.

9/R BMV 16/9 16.9.19 12 There is a recent decision of the Rel Cl in this matter, I think should put that up if available or keep -

MK 16/9/19

13 The Muni Council have since resolved to abandon this work (Vide Resn no 3 of the proceedings of their meeting held on 5th July 1919 herewith put up)

9/R KM 16/9/19 BM 14 The views of the Rel Cl differ from those of the President of the Municipality and also from those of the Chief Engineer - ~~Opinions~~ some ~~have~~ steps ~~have already~~ been done in this connection in the way of acquisition of properties near the junction of the Balepet and Sahadevroads and it is not known how much has been spent on this account. There is something to be said in favour of the Combined Scheme, as it is in the interests of sanitation that the swamp should be covered, and the earth collected therefrom may as well be utilised for forming a road, the necessity for which

NOTE—Contin sheet.

R S (II-2)

General and Revenue Secretariat

Ind File No. 2 of 1919

Serial No

has been received by post, and affixed to the Ad. Council -

For orders.

(Recorder)

1919

It is not known why the Ad. President has not yet reported officially to post, the resolution arrived at by the Ad. Council at their meeting on the 2nd August last. As subject No 3 [illegible] he may be asked about this

(Actg. Dewan)

DEWAN'S OFFICE.
Recd. on OCT 2 1919
Reg. No. 2322

2.9.19

It is for the Council to send a formal enquiry from first which when the work is quite complete can be done. The matter can proceed immediately, & can be disposed of, & some progress. The matter must be considered

28-5-21

NOTE—Contn. sheet.

R. & I.(1-2)

General and Revenue Secretariat.

File No. X of 1914

Serial No.

Submitted for orders whether this can be treated as 'D' notice and any other

11.4.14

14/4/14

Put up draft letter to Postal

14/4/14

Submitted draft for approval.

11.4.14

14/4/14

Letter No. 1166 dt. 10.4.14 from Postal

Collector.

State that work being done

for financial conditions enforce.

NOTE—Comm. above.

No 523
C 3.

Office of the City Municipal Council,
Bangalore City Dated 25th June 19.

Rev 12
1-7-19

Mul 2-19-1

From

Dewan Bahrdur Raja Sabha Bhushana
K P. Puttanna Chetty, Esq C.I E
President, City Municipal Council,
B A N G A L O R E

To

B. Ramaswamaiya, Esq , B.A B.L ,
Secretary to the Government of
His Highness the Maharaja of Mysore
Revenue Department, B A N G A L O R E

Sir,

Adverting to Government Proceedings No. 1821-3/M1 94-16-62 dated 24-9-1917 sanctioning the estimate for Rs 57,246/- of which Rs 37,183/- represented the cost of construction and the remainder the compensation for continuing the Kitchetty Chattram Road to the Bangalore City Railway Station I have the honour to state that tenders for construction were called for on 20-3-1918 and that only two tenders of Messrs Vengamaraju and S.Puttanna were received for the work, amounting to Rs 76,966/- and 61,089/- respectively, which exceeded the sanctioned item of Rs.37,183/- by Rs 39,783/- and 23,906/- respectively. The high rates for earthwork quoted in the tenders were due to the scarcity and uncertainty of labour and to the rapid rise in wages While the tenders were under consideration Mr M Subbayya, Municipal Councillor, suggested that the whole of the Dharmambudhi Tank Bund to the east and south might be lowered by 4 or 5 feet, as by doing so the cost of raising the bund across the tank would be reduced by more than one third and that this would also improve the ventilation and sanitation of the row of houses below the Municipal Garden

2 For these reasons the proposal of Mr Subbiah and the tenders were placed before the City Improvement Committee on 11-6-1918 who resolved that Mr D'Cruz be requested to revise

From

The Honorary President
Municipal Council
Bangalore City

To

The Secretary to
Government of Mysore
Revenue Deptt
Bangalore

Dated 25th June 1919
Despatched 28th June 19

No. 523
(23)

Enclosures 9

Submitting for sanction plans and estimates for Contin..... the Kitchen Chatram road to the City Railway station across the Dharmambudhi Canal

Municipal

revise the estimate in view of the desirability of lowering the bund of the Dharmambudhi Tank

3. The Executive Engineer, City Improvement Division in consultation with the Chief Engineer who was good enough to personally inspect the spot submitted a revised estimate and plans for Rs.86 927/- on 20-12-1918, which were placed before the City Improvement Committee on 21-3-1919 and duly approved.

4. The Municipal Council, however did not approve of the revised estimate and in their meeting on 10-5-1919, 12 voted against the revised estimate and 9 were for it, President not voting The main objection seemed to be the mistaken notion that the full tank level and the capacity of the tank itself would be reduced It was explained to them that the lowering of the excess height of the Bund did not mean the lowering of the Full Tank Level of the Tank So far as I could see the objection was based on mere sentiment.

5 The subject was again placed before City Improvement Committee on 24-5-1919 together with the resolution of the Municipal Council Of 10-5-1919. The Committee confirmed their resolution of 21-3-1919 and resolved to recommend Government to sanction the scheme, because of the undermentioned advantages

(1.) The approaches to the Tank Bund from Arlepet and Upparapet sides which are now steep and inconvenient would be made level and easy.

(2) The row of houses below the Municipal Garden will receive more fresh air and improve in sanitation because the High Tank Bund which blocks up the free flow of air will be lowered

(3.) Though the revised estimate for the New Road and lowering the Tank Bund is Rs.86,927/- against the original estimate of Rs 57,245/- for the new Road alone the combination of the two schemes would result in considerable economy as compared with the cost if the two schemes are worked separately.

6. Since the advantages to the City and Civil and Military station public of continuing the Kitchetty Chattram Road to the City Railway Station through the Dharmambudhi Tank bed have already been recognised and the scheme approved by the Municipal Council and sanctioned by Government, I do not consider any further remarks are needed on the subject at this stage.

7. I request that you may be so good as to move Government to sanction the revised estimate for Rs 86,927/- and plans herewith submitted for reasons explained in para 5 supra.

8. Copies of resolutions of City Improvement Committee dated [illegible] and 24-5-1919 and of Municipal Council dated 10-5-1919 are appended.

I have the honor to be,

S i r,

Your most obedient servant,

Honorary President

Encls
3 resolutions.
one Report
one Estimate with Genl Abstract.
one book of plans Contg 9 blue prints
one Statement
2 blue prints of Sections

T N L.

PROCEEDINGS OF THE BANGALORE CITY IMPROVEMENT COMMITTEE

AT THEIR MEETING HELD ON 21st MARCH 1919.

******

P R E S E N T.

1. Dewan Bahadur Raja Sabha Bhushana
   K.P Puttanna Chetty, Esq., C I E , (CHAIRMAN)
2. R.V. Sundaram Iyer, Esq , B A., B.C E.,
   (Deputy Chief Engineer)
3. P.G.D'Souza, Esq , B.A , B.L.,
   (Secretary to Government, Departments of Education & Agriculture)
4. Rajasilpi Visarada Rao Bahadur B. Subba Rao, Esq ,
   (Retired Chief Engineer)
5. S.H Lakshmimarasappa, Esq , B ARCH ,
   (Architectural Executive Engineer)
6. B S Ranoji Rao, Esq , B A ,
   (Chief Officer, City Municipality, BANGALORE)
7. F. Fernandes, Esq , L R C P S , L F P & S ,
   (Health Officer, Bangalore City)
8. J E A D'Cruz, Esq , B C E , A M T P I ,
   (Executive Engineer, City Improvement Division)
9. T Ramachandra Rao, Esq , B A , A C E ,
   (Municipal Engineer Bangalore)
10. S. Venkataranga Iyengar, Esquire,
11. B K Garudachar, Esquire,
12. D B Ramachandra Mudaliar, Esquire,

A B S E N T

1. Srinivasachrya Cadambi, Esq , B A , L C E ,
   (Chief Engineer of Mysore).
2. H Ramaiya, Esquire,
3. M Hariyanna, Esquire,
4. Yajaman Basappa, Esquire,

X

4 Letter No 558 dated 20-12-1918, from the Executive Engr City Improvement Division, submitting a revised estimate for Rs.86,927/- for continuing Kitchetty Chatram Road

esolution - The revised estimate for Rs 86,927/- for co

12

continuing the Kitchatty Chatram Road and improving the Road round the Dharmambudhi Tank was approved (Mr. Venkataranga - Iyengar voting against it).

(Sd) K.P Puttanna Chetty,
C h a i r m a n

" C O P Y "

for Honorary President.

T N.L

Proceedings of the Bangalore City Improvement Committee at their Meeting held in the Council Chamber of the City Municipal Office, on Saturday the 24th May 1919 at 5 A.M.

P R E S E N T.

1. Dewan Bahadur Rajasabha Bhushan
K.P. Puttanna Chetty, Esq., C.I.E., (Chairman).
2. R.V. Sundaram Iyer, Esq., B.A., B.C.E.,
(Deputy Chief Engineer).
3. S.H. Lakshminarasappa, Esq., B.ARCH.,
(Architectural Executive Engineer).
4. B.S. Ranoji Rao, Esq., B.A.,
(Chief Officer, City Municipality, Bangalore).
5. J.M.A.D'Cruz, Esq., B.C.E., A.M.T.P.I.,
(Executive Engineer, City Improvement Division).
6. T. Ramachandra Rao, Esq., B.A., A.C.E.,
(Municipal Engineer).
7. D.B. Ramachandra Mudaliar, Esquire.,
8. B.K. Garudachar, Esquire.,
9. F. Fernandes, Esq., L.R.C.P & S., L.F.P & S.,
(Health Officer, Bangalore City).
10. H. Hariamna, Esquire.,
11. S. Venkataranga Iyengar, Esquire.,

A B S E N T

1. S. Cadumbi, Esq., B.A., L.C.E.,
(Chief Engineer in Mysore).
2. P.C.D'Souza, Esq., B.A., B.L.,
(Secretary to Government Departments of Education and Agriculture.)
3. Rajasilpi Visarada Rao Bahadur
B. Subba Rao, Esq., B.A., B.C.E.,
(Retired Chief Engineer).
4. E. Ramayya, Esquire.,
5. Yajaman Basappa, Esquire.,

X X X X

9 Resolution of the Municipal Council dated 10-5-1919 not approving the revised estimate for continuing the Kitchetty Chatram Road, to the City Railway Station

Resolution - The Committee confirm their former resolution dated 21-3-1919 and further resolve that the revised estimate be

be submitted to Government for sanction. The lowering of the high Bund and the direct Road from the Railway Station across the Tank will be works of public utility tending to promote public convenience and public health

(Mr.Venkatarangaiengar dissenting)

(Sd) K P Puttanna Chetty,

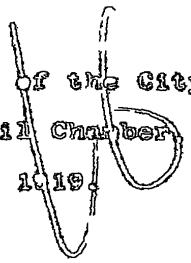
C h a i r m a n.

" C o p y ".

Honorary President

No. XVII.

Proceedings of the Ordinary General Meeting of the City Municipal Council, Bangalore, held in the Council Chamber City Municipal Office, on Saturday the 18th May 1918.



Present.

Rajasabha Bhushana Dewan Bahadur
K.P.Puttanna Chetty, Esqr., C.I.E., Honorary President.

MUNICIPAL COUNCILLORS.

1. D.Chinnaswami Chetty, Esqr.,
2. Dasada Siddabasappa Setty, Esqr.,
3. C.V.Narasimha Iyengar, Esq. B.A., L.L.,
4. P.M.Basappa, Esquire,
5. L.A.Pourwal, Esquire,
6. D.K.Garudachar, Esqr.,
7. Dasada Veerabhadra Setty, Esqr.,
8. C.Siddaveerappa, Esqr.,
9. D.Adeppa, Esquire,
10. B.V.Ramaswami Chetty, Esq., B.A.,
11. M.Subbayya, Esqr., B.A.,
12. R Gopalswamy Iyer, Esqr.
13. S.Venkatachala Iyengar, Esq
14. M.K.Krishnamurti Rao Esq.,
15. L.Ramachendraswami, Esq B.A.
16. S.Venkataranga Iyengar, Esq
17. K.S.Krishna Iyer, Esq. B.A.
18. D.M.Gnanapriam Pillay, Esq.
19. D.Venkataramaiya, Esq B.A.
20. M.Abbas Khan, Esquire,
21. B.Usman Khan, Esquire,
22. P.Subbarama Chetty, Esq.,
23. M.Ramachendra Rao Sindhe, Esquire.

Absent.

1. M.Basava Iya, Esq. B.A., B.L.,
2. K.Ramaiya, Esquire,
3. Rev. D.A.Rosa
4. S.K.Narasimhiah, Esquire.

X X X

16. Opinion of the Bangalore City Improvement Committee approving the revised estimate for continuing the Kitchetty Chatram Road, amounting to Rs.86,927/-

Resolution - Not approved (12 voting against and 9 for the proposition President not voting)

(Sd) K P Puttanna Chetty,
Honorary President

"C o p y"

Report to accompany the revised plans and estimates for continuing Kitchetty Chattram Road across the Dharmabudi tank and for lowering the roads on the bund round Dharmabudi tank.

The accompanying plans and estimates have been got up in pursuance to the Resolution of the Improvement Committees Meeting on 11th June 1918 and to Mr. M Subbiah's letter dated 15th May 1918 communicated with Honorary President s Endorsement dated 16th May 1918, and to the Proceedings of the Improvement Committee at their meeting on the 5th Instant

Scope of present estimates.

The Committee in consequence of the high rates tendered for the work of continuing Kitchetty Chattram road sanctioned in G O No 1821-3 ML dated 24th September 1917 resolved that it might be cheaper to consider the desirability of lowering the proposed road and of lessening the quantity of earth work and stonework to it and of incidentally lowering the roads on the bund all round the tank so as (a) to secure more ventilation for the built area below the tank (b) to obtain easier gradients on the roads (1) to the Rilway Station through the under bridge (2) to Arlepet and (3) to Balepet and (c) to obtain in the vicinity the required earth for the proposed road.

what is contemplated in the present ~~time~~ estimate.

According to the estimates and plans herewith submitted the level of the proposed road has been reduced from R L 65 61 to 58 00 or by 7½ feet nearly, resulting in a saving of (74455-33686) 40769 cubic yds of earth work and (1969-1327) 642 cu yds of

rough stone revetment and in the total of Rs.4587/- cost of the proposed road.

The reduction of formation level in the proposed road necessitated a corresponding reduction of level at the points where it joins the roads running north and south on the tank bund, the latter have been graded to meet the Sashadri Road, Balapet and the Arlapet Roads and the road leading through the under bridge to the railway station.

The accompanying statement of existing grades and grades proposed shows the permanent improvement in the way of facility for traffic.

The Sashadri Road from under bridge upto the Culvert and the road over the tank bund on the south connecting Arlepet and Balepet roads, have also been graded to work in with the grading of the previous roads. The result of the cutting down of the roads on the bund round the tank is that the approaches to the railway station, to Arlepet and to Balepet roads will be permanently eased and the awkward twist at the south-western corner of the tank would be once for all removed and the Kemmannagundi road skirting the railway compound would be directly joined with the road on the tank bund

The cutting or lowering of the tank bund roads has been so regulated that the quantity of earth thereby obtained would do to form the proposed road and to suffice for filling and grading the tank bed to the north of the proposed road so that no water would stand in the latter area--

vide marginal statement.

	C.Yds
Total quantity of cutting	91160
Total for forming new road.	32939
Total for filling and grading area to north of new road	49850
Total earth work for forming ring bund and chanel banks..	8209
Total.	90998

With regard to the waste weir at the north of the tank, its level has been reduced from 58 to 54

A ring bund to admit water discharged from only the area around the Jail to the south or the tank side of the proposed road has been added, also a culvert with banks on either side to admit any drainage from the feeder on the north and also to prevent the spreading of the same in the area to be laid out as a park, and to serve for the discharge of the surplus of the tank when it fills upto the R.L 54 has been provided.

A garden or park can at once be laid out on the north of the proposed road without fear of any part of it being swamped

Cost

The cost of the scheme amounting to Rs.86927/- may be arranged as follows --

Continuing Kitchetty Chattram Road Rs.63524/-

Lowering and grading roads round the tank Rs.23403/-

Rates.

In rating the earth work 3as has been allowed for cutting, as below the road surface and the bunds consist of made earth and 3 as for filling and forming road including lead The earth available from lowering the surrounding roads, of which the new bund and road on it would be formed would be much better stuff for the purpose than the silt and slush that would otherwise have to be takenout of the tank bed The old revetment to the north of the proposed road can easily be dismantled and

carted at both ends for revetting the proposed road. Owing to rails being too costly at present, a burnt stone parapet 2½' high constructed of slabs between reinforced concrete pillars has been provided. The width of the roadway has been kept 45'.

The amount of compensation plus 15% for compulsory acquisition has been retained from the original estimate.

A lump sum provision of Rs.100/- has been made for lowering the waste weir, so that the roads around and through the tank may not be topped by the water level in the tank.

The following records accompany the project --

1 Revised estimate for Rs.86,927/-

1. Survey plan of Dhamambudi Tank (Blue print)

6 Revised section of bund (Blue print)

2 Plans of proposed culverts (-Do

1 Report

8. Sanctioned plans and estimates received with Honorary Persident No 316 dated 30th January 1918

Exxcutive Engineer,
City Improvement Division

-Revised-

City Improvements - Bureau

Estimate of the probable cost of constructing Kutcha Metham road across Dharmambudhi tank to join the Railway feeder road, Bangalore City

Particulars of work	No	Dimensions			Cubic	Total	
Earth Work Cutting from subedar chatram road to the road on the east of tank bund formation level RL 5800	1	258	$\frac{45+47\frac{1}{2}}{2}$	114	13571		
	1	92	$\frac{45+48\frac{1}{2}}{2}$	154	6596		
Total cutting					20167	Cyd	747
Earth Work putting embankment in 6" layers including watering & tamping using the spoil	1	1507	$\frac{45+70}{2}$	933	808506		
Add 10% for settlement					80850		
Total embankment					889356	Cyd	32939
Scarifying road surface to receive metalling from subedar chatram road to the centre of Ry feeder road	1	1958	-	18	35244	Cyd	3916
Metal collection including, breaking, carting and stacking.	1	1958	18	$\frac{3}{8}$	13217	Cyd	490
Boulder collection including, carting and stacking	1	1958	19	$\frac{1}{2}$	18601	Cyd	689
Gravel collection including excavating carting & stacking	1	1958	18	$\frac{1}{12}$	2937	Cyd	109
Sand collection including carting & stacking	1	1958	18	$\frac{1}{24}$	1469	Cyd	54
Spreading and consolidating metal with steam road roller including watering	As per collection					Cyd	490
Spreading and consolidating boulder with steam road roller.	As per collection					Cyd	689
Spreading and consolidating gravel and sand including watering	As per collection				109+54 =	Cyd	163

Rd stone pavement using the stone of the existing bund including dismantling & carting.							
On the water side of new bund	1	1521	2	$11\frac{3}{4}$	35838	cyds	1327
Rough burnt stone slabs set through ferro concrete pillars $10\frac{1}{2}$ feet apart for the side of new bund	2	1521	-		3042	Rft	3042
Earth work in wet foundation excavating & refilling							
Foundation for the new bund	1	1521	70	3	319410		
do for the ring bund	1	550	25	3	41250		
Total					360660	cyds	13358
Earth work for forming ring bund with slopes $1\frac{1}{2}$ to 1 on both side	1	550	ave area 103		56650	cyds	2099
Earth work for forming channel banks top width 4', side slopes $1\frac{1}{2}$ to 1 up to RL 5800							
from proposed culvert of 5 Vents	2	660	ave. area 78		102960		
Further on up to Sheshasee road	2	500	$\frac{78+66}{2}$		62000		
Total.					164960	cyds	6110
Earth work for filling up the tank bed on the garden side of the proposed road	1	346060	area ave.	$\frac{1}{4}$	1384240		
Deduct for the channel bed portion, centre portion	1	660	25	$\frac{1}{2}$	33000		
sloped portions	2	$\frac{660}{3}$	$\frac{4\times1}{2}$ area		5280		
Total deductions.					38,280		
Balance.					1345960	cyds	4985
Turfing Slopes of ring bund	2	550		$14\frac{1}{2}$	15950		
Outer slopes of channel banks	2	660		11	14520		
do do	2	500		$\frac{11+9}{2}$	10000		
Inner slopes of - do -	2	660		$\frac{18+11}{2}$	19140		
do do	2	500		$\frac{11+9}{2}$	10000		
Total turfing				Sft	69610	sqyds	7735
Cow trenching a culvert of 2 Vents $4'\times8\frac{3}{4}'$ in the proposed road. as per separate Estimate.						Rft	3350

For constructing a culvert of 5 Vents 5'×7' in the proposed road as per separate Estimate						Rupees - 5,95
Turfing the rear slope of the new bund.	1	1521	-	17	25857	
front slope at top of revetment	1	1521	-	1½	2281	
Total lur						

Abstract

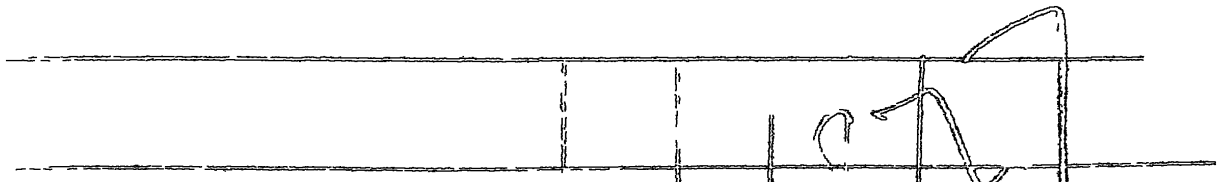
Items of work	Per	Rate	Qty	Cost	Remarks
Earth Work, cutting	cyds	" 3 "	747	140	
Earth Work embankment upto R L 5800 including watering and tamping (spoil earth to be used)	"	" 3 "	32939	6176	
Scarifying road surface to receive metalling	sq yds	-	1½ 3916	31	
Metal collection including breaking, carting and stacking	cyds	2 8 "	490	1225	
Boulder collection including carting & stacking	"	2 " -	689	1378	
Gravel collection including excavating carting and stacking	"	- 12 -	109	82	
Sand collection including carting & stacking	"	- 12 "	54	41	
				60	

	Brought forward						
8	Spreading and consolidating metal with steam road roller including watering	Cyd.	-	6	-	490	184
9	Spreading and consolidating boulder metal with steam road roller	"	-	6	-	689	258
10	Spreading and consolidating gravel and sand including watering	"	-	4	-	163	41
11	Old stone pavement using the stones of the existing bund including dismantling and carting	"	1	8	-	1327	1991
12	Rough burnt stone slab let through ferro concrete pillars 10½ ft. apart	Rft.	1	12	-	3042	5324
13	Earth Work excavation in wet foundation and refilling with watering and tamping	Cyd.	-	4	6	13358	5427
14	Earth work for forming puddle bund with spare earth including watering and tamping	Cyd.	-	3	-	2099	394
15	Earth Work for forming channel banks with spare earth including watering & tamping	"	-	3	-	6110	1146
16	Earth Work filling the tank bed with spare earth	"	-	3	-	49850	9347
17	Turfing	Syd.		1	-	7735	483
18	Construction a culvert of 2 Vents 4'×8'3/4	As per separate Est.					3350
19	Constructing a culvert of 5 Vents 5'×7'			do			5950
20	Turfing the slopes of proposed bund	Syd.	-	1	-	3126	195
	Total						43163
	Add contingencies at 5%.						2158
	Total for the road						45321
	Add compensation for the land to be acquired						15829
	Add 15%. for the Compulsary acquisition.						2374
	Grand Total		Rupees				63,524

Detailed estimate of the probable cost of constructing a culvert of 2 Vents 6'x9'3/4" across the proposed main road in continuation of Ketchetty chatram Road Bangalore.

Particulars of work	No.	Dimensions Length	Breadth	Height	Total
With Work of excavation for foundations. (wet foundation)					
Abutments	2	45	5	6½	2925
Pier	1	49½	4¼	6½	1361
wings towards garden side	2	17¼	(5+4½)/2	6½	1047
do bank side	2	14¼	(5+4)/2	6½	834
Returns to wings garden side	2	½(3½×2½)		6½	57
do water side	2	½(3½×3)		6½	68
Curb walls	2×2	2	3	6½	156
flooring	2	40½	2	1½	243
Total excavation in soft soil					6691/27 = 248 Cft
Sunken Concrete					
Foundations of abutments	2	45	5	1½	675
" " Piers	1	49½	4¼	1½	314
" " wings garden side	2	17¼	(5+4½)/2	1½	242
" " water side	2	14¼	(5+4)/2	1½	193
Returns to wings garden side	2	½(3½×2½)		1½	14
do water side	2	½(3½×3)		1½	16
Flooring	2	42	3½	½	147
Curb walls	2×2	2	3	1½	36
Total Sunken concrete in Cft					1637 Cft
Rubble masonry, cheek dressed in Sunken Foundations					
Abutment foundations 1st step	2	45	4	2	720
Piers do do	1	48½	3½	2	314
wings towards garden side do	2	16¾	(3¼+2½)/2	2	197
do water side do	2	13¾	(3¼+2½)/2	2	162
Returns to wings garden side	2	4/2	2½	2	20
do water side	2	½(2½×2½)		2	13
Curb walls	2×2	3	2	2	48
Abutment foundation 2nd step	2	45	3½	3	945
Piers do do	1	47¾	2¾	3	394
Cc.					

B F						
Wings towards garden side 2nd step		2	$16\frac{1}{2}$	$\frac{2\frac{3}{4}+2\frac{1}{4}}{2}$	3	241
do water side do		2	$13\frac{1}{2}$	$\frac{2\frac{3}{4}+2\frac{1}{4}}{2}$	3	198
Returns to wings garden side do		2	$\frac{3\frac{1}{2}}{2}$	2	3	21
do water side do		2	$\frac{1}{2}(2+2\frac{1}{4})$		3	5
Curb walls		2+2	$3\frac{1}{2}$	$1\frac{1}{2}$	3	63
Superstructure. Abutments		2	45	3	$9\frac{3}{4}$	2633
Piers		1	45	$2\frac{1}{4}$	$8\frac{3}{4}$	886
wings garden side		2	$16\frac{1}{4}$	$\frac{(16.40+2.35)}{2}$		305
do water side		2	$13\frac{1}{4}$	$\frac{(16.40+2.35)}{2}$		248
returns to wings G side		2	$\frac{3}{2}$	$1\frac{1}{2}$	$1\frac{1}{2}$	7
do W side		2	$\frac{1}{2}(1\frac{1}{2}+2)$		$1\frac{1}{2}$	5
cut waters to piers		2	$\frac{2\frac{1}{2}+1}{2}$	$1\frac{1}{8}$	$8\frac{3}{4}$	20
caps to cut waters		2	$\frac{1}{3}\times(1\frac{1}{8})^3$			1
Total.						7446
Deduct for space occupied by Covering slabs over vent ways		2+2	45	$4\frac{1}{2}$	$\frac{3}{4}$	135 269
Balance Stone in Sunk Panels.						7311
						7311 cft
Covering slabs 9" thick granite dressed and laid in Sunk Panels.						
Over vent ways.		2	45	6		540
Total 9 slabs roughly dressed in sft						540
Covering slabs 9" (well dressed and stone work)						
edges to be chamfered and well laid in Sunk Panels.						
Curb Curb stone at top of						
Cutwater		2	$16\frac{1}{4}$	$1\frac{3}{4}$		57
Total 9" slabs neatly dressed in sft						57
Coping slabs 6" thick (well dressed and edges chamfered)						
and well laid in sunk panels.						
over wings in garden side		2	19	$1\frac{3}{4}$		63
do water side		2	15	$1\frac{3}{4}$		53
over returns garden side		2	$1\frac{1}{2}$	$1\frac{3}{4}$		5
do water side		2	$\frac{1}{2}(1\frac{1}{2}+1\frac{1}{2})$			2
Total coping slabs 6" thick well dressed						123
						123 cft



Rough plain pitching with granite with sunken concrete.						
Floor of Ventaroop.	2	42	$3\frac{1}{2}$	1	294	
Apron on down stream side	1	$\frac{10\frac{1}{2}+3\frac{3}{4}}{2}$	$+8\frac{3}{4}+1$		200	
Total rough plain pitching granited with sunken concrete in cft.					494	494
Coating with cement.						
Faces of abut ments.	2	45	$9\frac{3}{4}$		878	
do of Piers.	2	45	$9\frac{3}{4}$		878	
do of cut waters	2+2	$1\frac{7}{12}$	$9\frac{3}{4}$		59	
do of wings garden side	2	18	$\frac{9\frac{3}{4}+2\frac{1}{2}}{2}$		221	
do of returns do	2	3	2		12	
do ends of returns do	2	$1\frac{1}{2}$	2		6	
do of wings water side	2	15	$\frac{9\frac{3}{4}+2\frac{1}{2}}{2}$		184	
do of returns do	2	3	2		12	
do ends of returns do	2	$1\frac{1}{2}$	2		6	
over coping plans at tops of culvert	2	$16\frac{1}{4}$	$1\frac{3}{4}$		7	
do over wings garden side	2	18	$1\frac{3}{4}$		63	
do do water side	2	15	$1\frac{3}{4}$		53	
do over returns	2+2	$1\frac{1}{2}$	$1\frac{3}{4}$		11	
Floor under the culvert	2	45	4		360	
Total pointing in sqrs.					2800	2500
Rough plain backing						
to abut ments	2	$45\frac{1}{2}$	$\frac{4+2}{2}$	$10\frac{1}{2}$	2867	
to wings	2	13	$\frac{3+2}{2}$	$\frac{10\frac{1}{2}+2\frac{1}{2}}{2}$	507	
Total in cyds					$\frac{3374}{27}$	125 cyds
Diving water.					Lump Sum Rupees	50/-

Abstract estimate of the proposed culvert of 2 Vents 4'×8½' in the new road proposed in continuation of Richards Chambers road Bangalore

Items of work.	Per	Rate	Qty	Cost.
Earth Work ex. excavation in wet foundations	cyds.	- 4 -	248	62
Sunki & concrete.	cft.	- 4 -	1637	409
Stone masonry chisel dressed in Sunki mortar	cft.	- 4 6	7311	2056
Covering slab 9" thick joints dressed well laid in sunki mortar	sft.	- 10 -	560	338
Sunki stones 9" thick (cut-stone work) outer edge to be chamfered and laid in sunki mortar	"	12 -	57	43
Coping slab 6" thick well laid in sunki mortar outer edge to be chamfered.	sft.	- 8 -	123	62
Rough stone pitching well grouted with the sunki concrete	cft.	3 -	494	93
Cement pointing.	sq.	4 - -	280	112
Rough stone backing	cs.	1 - -	125	125
Baling water	Lump Sum		Rupees	50
Total Rupees				3350/-

Estimate of the probable cost of constructing a 4 st. sluice 5'×7' for letting in the water from the feeder (Country side north of the tank) across the proposed bund in Dharmavaram tank

Particulars of work	No	Dimensions			Contents	Remarks
Earth work excavation in wet foundation						
Abutments	2	45	5	6½	2925	
Piers	4	49¼	4¼	6½	5442	
Wings, garden side	2	14½	(4¼+3½)/2	6½	730	
do water side	2	11	(4¼+3½)/2	6½	654	
Returns to wings both sides	4	(4+3¼)/2	3½	6½	330	
Curb walls	2×5	3	3	6½	485	
Flooring	5	40½	3	1½	911	
Apron, water side	1	8	(23+50½)/2	2½	336	
Total excavation in wet foundation					11811	cyds 437
Curb concrete for foundations						
Abutments	2	45	5	1½	675	
Piers	4	47¼	4¼	1½	1356	
Wings garden side	2	14½	(4¼+3½)/2	1½	169	
do water side	2	11	(4¼+3½)/2	1½	128	
Returns to wings both sides	4	(4+3¼)/2	3½	1½	76	
Curb walls	2×5	3	3	1½	135	
Total Curb concrete for foundations					2539	cft 2539
Lime masonry (Chunk, dressed) in Curb mortar						
Foundation I st footing - Abutments	2	45	4	2	720	
Piers	4	48¼	3¼	2	1254	
Wings, garden side	2	14½	(3¼+2½)/2	2	167	
do water side	2	11	(3¼+2½)/2	2	126	
Returns to wings both sides	4	(3½+2¾)/2	2½	2	62	
Curb walls	2×5	4	2	2	160	
II nd footing Abutments	2	45	3½	3	945	
Piers	4	47¾	2¾	3	1576	
&c.						

Brought forward							
wing, garden side	2	$4\frac{1}{2}$	$\frac{2\frac{3}{4}+2}{2}$	3	207		
—do— water side	2	11	$\frac{2\frac{3}{4}+2}{2}$	3	157		
returns to wings both sides	4	$\frac{3\frac{1}{4}+2\frac{1}{2}}{2}$	2	3	69		
Scuttle walls	2×5	$4\frac{1}{2}$	$1\frac{1}{2}$	$3\frac{1}{2}$	169		
Superstructure - Abutments	2	45	8	7	1890		
Piers	4	45	$2\frac{1}{4}$	7	2835		
Wings, garden side	2	$14\frac{1}{2}$	$\frac{18\ 75+22\ 5}{2}$ area	25	304		
—do— water side	2	11	$\frac{18\ 75+22\ 5}{2}$	25	231		
Returns to wings both sides	4	$\frac{3+2\frac{1}{4}}{2}$	$1\frac{1}{2}$	$1\frac{1}{2}$	24		
cut waters	2×4	$2\frac{1}{2}$	$1\frac{1}{8}$	7	71		
tops of cut waters	2×4	$2\frac{1}{2}$	$1\frac{1}{8}$	$\frac{1}{3}$	3		
Backing to covering slab over abutments	2	45	2	$\frac{3}{4}$	135		
Blocking course	2	40	2	2	320		
Parapet	2	$39\frac{1}{2}$	$1\frac{1}{2}$	$1\frac{3}{4}$	207		
Total masonry					11688	cft	11688
Covering slabs over Vents 9" thick joints dressed and laid on Surki mortar	1	45	36	(9")	1620	sft	1620
Coping slabs 6" thick, well dressed, edges chamfered & laid on Surki mortar.							
Over parapet walls	2	40	$1\frac{3}{4}$	(6")	140		
over wings' garden side	2	16	$1\frac{3}{4}$		56		
—do— water side	2	$13\frac{1}{2}$	$1\frac{3}{4}$		47		
over returns	4	ave $3\frac{1}{2}$	$1\frac{3}{4}$		25		
Total					268	sft	268
Coping, slabs 6" thick laid on Surki mortar							
Over cut walls	2×5	$5\frac{1}{2}$	$1\frac{1}{2}$	(6)	82	sft	82
Rough stone Flooring, apron well grouted with Surki concrete. Flooring	5	42	$4\frac{1}{2}$	$1\frac{1}{2}$	1417		
Apron down stream side	1	8	$\frac{33\frac{1}{2}+57}{2}$	$1\frac{1}{2}$	507		
Total					1924	cft	1924
Rough stone backing to abutments.	2	40	$\frac{4+2}{2}$	8	2160	cyd	80

27	Lining with, cement						
	Face of abutments	2	45	-	7	630	
	do piers	2×4	45	-	7	2520	
	do cut waters	2×4	3¼	-	7	182	
	do wings garden side	2	16	-	$\frac{10+14}{2}$	184	
	do do water side	2	12½	-	$\frac{10+14}{2}$	144	
	do returns both sides	4	4½	-	1½	27	
	do blocking course with cut	2	44	-	2	176	
	do parapets all round	2	82	-	1¾	287	
	Flooring under the culvert	5	45	-	5	1125	
	For coping slabs etc etc		L S			260	
	total					5535	Sqs 5535
Lining water		Lump Sum				Rupees	96/-

Abstract.

	Name of work	Per	Rate	Qty	Cost	Do
1	Earth Work excavation in wet foundation	Cyd	- 4 -	437	109	
2	Sunki concrete for foundation	Cft	- 4 -	2539	635	
3	Stone masonry (chisel dressed) in Sunki mortar	"	- 4 6	11632	3271	
4	Covering slabs over vents 9" thick joints dressed and laid in Sunki mortar	Sft	- 10 -	1620	1012	
5	Coping slabs 6" thick, well dressed, edges chamfered and laid in Sunki mortar	"	- 8 -	268	134	
6	Coping slabs 6" thick laid in Sunki mortar	"	- 6 -	82	31	
7	Rough stone flooring & apron well grouted with Sunki concrete	Cft	- 3 -	1924	361	
8	Rough stone backing to abutments	Cyd	1 - -	80	80	
9	Pointing with cement	Sqrs	4 - -	5535	221	
10	Baling water		Lump Sum		96	
	Total			-	Rupees	5,956

Municipality — Tank Improvement Bureau

Detailed Estimate of the probable cost of reforming metalling on the bund all round the Dharmambudhi Tank bund, clearing and casing the gradients of approaches at all junctions.

Particulars of work	Nos	Dimensions			Cubic contents		Total
with work lowering & reforming the bund and cutting side drains. As per separate details attached						Cyds	91,160
Clearing road surface to receive metalling.							
Sheshadri road from under bridge to station $\frac{B}{1}$	1	920					
Road from station $\frac{A}{1}$ to station $\frac{A}{3}$	1	242					
Road from $\frac{A}{3}$ to junction with Subedar chatram & Kalapet roads $\frac{3}{3}$	1	3558					
Road from $\frac{A}{3}$ to $\frac{A}{2}$	1	223					
Road from D to $\frac{D}{1}$	1	100					
Road from D to $\frac{D}{2}$	1	297					
Approach road to Railway station	1	730					
Road on east of tank from culvert to $\frac{C}{1}$	1	970					
Total		7040	-	18	126720	Syds	14080
Metal collection including breaking carting and stacking	1	7040	18	2 1/4	23760	Cyds	880
Gravel collection including excavating, carting and stacking.	1	7040	18	1/12	10560	Cyds	391
Sand collection including carting & stacking	1	7040	18	1/24	5280	Cyds	196
Breaking road surface and removing the existing metal including carting & stacking							
Wherever the roads are regraded	1	7040	18	4 1/2	47520	Cyds	1760
Spreading and consolidating metal with steam road roller including watering							
Quantity as per metal collection				Cyds	880		
— do — as per picking & removing old metal less 50% for wastage		1760/2			880		
Total					1760	Cyds	1760

Spreading and consolidating gravel and sand including watering						
As per collection		391 + 196		587	cyd	587
Removing and refixing the existing handrails.						
Railings on bank side	1	5106	- -	5106		
-do- on the side of municipal garden.	1	1928	- -	1928		
Total.				7034	Rft	7034
Lowering the waste weir from R L 57 91 to R L 54 00 and resetting the apron.		Lump sum			No	100/

Abstract

	Items of work	Per	Rate	Qty	Cost	Total.
1	Earth Work lowering and reforming the bund and cutting side drain	Cft	" 3 "	91160	17092	
2	Scarifying road surface to receive metal	Sqft	" " 1½	14080	110	
3	Metal, collection including breaking, carting and stacking	Cft	2 8 "	880	2200	
4	Gravel, collection including excavating carting and stacking	"	" 12 "	391	293	
5	Sand, collection including carting & stacking	"	" 12 "	196	147	
6	Packing road surface and removing the existing metal including carting and stacking	"	" 6 "	1760	660	
7	Spreading and consolidating metal with steam road roller including watering	"	6 "	1760	660	
8	Spreading and consolidating gravel and sand including watering	"	- 4 -	587	147	
9	Removing and refixing the existing hand rails.	Rft	" 2 -	7034	880	
10	Lowering the waste weir from R L 57916 to R L 54600 and resetting apron.		Lump Sum		100	
	Total -				22289	
	Add contingencies at 5%				1,114	
	Grand Total	Rupees				23403

Sheet showing the details of earth-work Cutting and lowering the on-temp road on land bund around Thamarakuda Tank.

Station points	Progressive distance between station points	Ground level	Formation level	Depth of Cutting	Mean depth of Cutting	Mean area of Cutting	Contents	Total
		Earth work for cutting the on-temp embankment with slopes 1½ to 1						
		a Scotch road to the south of Tank from road bridge						
	0	36 21	36 21					
	37	37 05	36 21	0 84	0 42	$\frac{45+45\ 84}{2}$	786	
	13	37 34	36 21	1 13	0 99	$\frac{45+46\ 98}{2}$	1184	
	90	39 40	39 10	0 30	0 71	$\frac{45+46\ 42}{2}$	2920	
	99	44 18	42 27	1 91	1 10	$\frac{45+47\ 20}{2}$	5014	
4/1	158	51 94	47 35	4 59	3 25	$\frac{45+51\ 50}{2}$	24774	
4/2	207	61 44	54 00	7 44	6 02	$\frac{45+57\ 04}{2}$	63579	
	162	61 94	58 36	3 58	5 51	$\frac{45+61\ 53}{2}$	47545	
	80	62 22	60 52	1 70	2 64	$\frac{45+52\ 92}{2}$	10340	
	74	62 51	62 51		0 85	$\frac{45+47\ 55}{2}$	2910	
Total	920							
				Total			150972	158972
		Approach road in Continuation of South bund at adopted gradient						
D	0	56 09	56 09					
D/1	100	65 33	59 00	6 33	3 16	$\frac{45+54\ 48}{2}$	15718	15,718
	Road from A/1 to A/3							
A/1	0	51 94	47 35	4 59				
A/3	242	61 53	54 00	7 53	6 06	$\frac{45+63\ 18}{2}$	79324	79,324
	Road from D to D/2							
D	0	58 09	58 09					
	165	61 65	57 80	3 85	1 92	$\frac{45+50\ 76}{2}$	11168	
D/2	132	65 00	59 16	5 84	4 85	$\frac{45+59\ 55}{2}$	33466	
Total	297			Total			44634	44,634 / 29648

Road to the east of tank from P to Q — B/F — 298648

		66.18	66.18	-	-			
	108	66 31	64 31	2 00	1.00	$\frac{45+48}{2}$	5022	
	139	66 48	61 91	4 57	3 29	$\frac{45+54}{2}$ 87	22836	
	112	66 71	59 96	6 75	5-66	$\frac{45+61}{2}$ 98	33908	
	113	66 50	58 00	8 50	7 62	$\frac{45+67}{2}$ 86	48,589	
	16	66 28	58 00	8 28	8 39	$\frac{45+70}{2}$ 17	7730	
Junction with Kathiawar Chattrani Junction road	17	66 46	58 00	8 46	8 37	$\frac{45+70}{2}$ 11	8189	
	33	66 53	58 00	8 53	8 49	$\frac{45+70}{2}$ 47	16176	
	153	65 82	58 60	7 22	7 88	$\frac{45+68}{2}$ 64	68,504	
	88	66 09	58 95	7 14	7 18	$\frac{45+66}{2}$ 54	35,237	
	90	66 45	59 30	7 15	7 14	$\frac{45+66}{2}$ 42	35799	
C/1	101	68 37	59 70	8 67	7 91	$\frac{45+68}{2}$ 73	41,984	
2	970				Total		323974	323974

6 Approach road to Railway station

	730	-	-		5 94	$\frac{45+62}{2}$ 82	116882	116,882

7 Road on South and west of the tank from Baliyet Junction to A/2 on way to canal bridge

	0	59 85	59 85					
	28	60 32	59 84	0 48	0 24	$\frac{45+45}{2}$ 72	805	
	100	62 24	59 79	2 45	1 47	$\frac{45+49}{2}$ 41	6939	
	100	65 25	59 74	5 51	3 98	$\frac{45+58}{2}$ 94	20286	
C/1	100	68 37	59 70	8 67	7 09	$\frac{45+66}{2}$ 27	39445	
	100	70 08	59 65	10 43	9 55	$\frac{45+73}{2}$ 65	58655	
	100	7117	59 60	11 57	11 00	$\frac{45+78}{2}$ 00	67650	
	100	7195	59 55	12 40	11 98	$\frac{45+82}{2}$ 94	75,438	
	100	7180	59 50	12 30	12 35	$\frac{45+82}{2}$ 05	78,453	
	100	7173	59.45	12 28	12 29	$\frac{45+81}{2}$ 87	77,962	
	100	7141	59 41	12.00	12 14	$\frac{45+81}{2}$ 42	76737	
					6 @		499.870	7,39504

							B F.	499870	739504
	100	70 74	59 36	11 38	11 69	$\frac{45+80}{2}$	07	73103	
	100	70 41	59 31	11 10	11 24	$\frac{45+78}{2}$	72	69571	
	100	69 96	59 26	10 70	10 90	$\frac{45+77}{2}$	70	68871	
	100	69 27	59 22	10 05	10 37	$\frac{45+76}{2}$	11	62796	
	100	68 57	59 17	9 40	9 73	$\frac{45+74}{2}$	19	57986	
	44	68 20	59 15	9 05	9 22	$\frac{45+72}{2}$	66	23866	
	56	67 48	59 12	8 36	8 70	$\frac{45+71}{2}$	10	28282	
	100	66 56	59 07	7 49	7 93	$\frac{45+68}{2}$	79	45168	
	100	65 63	59 02	6 61	7 05	$\frac{45+66}{2}$	15	39180	
D/1	50	65 33	59 00	6 33	6 47	$\frac{45+64}{2}$	41	17697	
	50	65 66	59 03	6 63	6 48	$\frac{45+64}{2}$	44	17729	
	100	65 45	59 08	6 37	6 50	$\frac{45+64}{2}$	50	35588	
	100	65 83	59 14	6 19	6 28	$\frac{45+63}{2}$	84	34176	
D/2	30	65 00	59 16	5 84	6 01	$\frac{45+63}{2}$	03	9739	
	70	65 44	59 19	6 25	6 05	$\frac{45+63}{2}$	15	22901	
	100	65 64	59 25	6 39	6 32	$\frac{45+63}{2}$	96	34431	
	100	65 77	59 31	6 46	6 42	$\frac{45+64}{2}$	26	35072	
	100	65 72	59 36	6 36	6 41	$\frac{45+64}{2}$	23	35008	
	100	65 50	59 42	6 08	6 22	$\frac{45+63}{2}$	66	33793	
	100	65 53	59 47	6 06	6 07	$\frac{45+63}{2}$	21	32842	
	100	65 44	59 50	5 94	6 00	$\frac{45+63}{2}$	00	32400	
	100	65 40	59 15	6 25	6 10	$\frac{45+63}{2}$	30	33035	
	100	65 17	58 44	6 73	6 49	$\frac{45+64}{2}$	47	35523	
	100	64 76	57 74	7 02	6 87	$\frac{45+65}{2}$	61	37995	
	100	63 84	57 03	6 81	6 92	$\frac{45+65}{2}$	76	38323	
	100	62 50	56 33	6 17	6 49	$\frac{45+64}{2}$	47	35523	
	100	61 92	55 62	6 30	6 23	$\frac{45+63}{2}$	69	33857	
	100	61 70	54 92	6 78	6 54	$\frac{45+64}{2}$	62	35846	
	100	62 14	54 21	7 93	7 36	$\frac{45+67}{2}$	08	41245	
						60		1599416	7,39,504

						B F	1599.416	7,39,504
A/3	30	61 53	54 00	7 53	7 73	$\frac{45+68}{2}$	13124	
	70	61 91	54 00	7·91	7 72	$\frac{45+68}{2}$	30576	
	100	61 87	54 00	7 87	7 89	$\frac{45+68}{2}$	44843	
	53	61 44	54 00	7 44	7 65	$\frac{45+67}{2}$	22898	
					Total		17,10,857	17,10,857

Cutting side drains wherever the roads are regraded.

2×397	In Shivshahi road from under bridge to station $\frac{A}{1}$ (both sides)
2×242	From $\frac{A}{1}$ to $\frac{A}{3}$ (both sides)
2×297	In Arabpet road from D to $\frac{D}{2}$
nil	In road to the east of tank (embankment)
2×730	In approach road to Rly station
2×328	In road on south of tank bund from Arabpet junction to station $\frac{C}{1}$
1×1560	In road on west of tank bund from $\frac{D}{2}$ to $\frac{A}{3}$ (only one side)

total - 5488 × $\frac{3+1}{2}$ 10976 cft ——— 10976 10,976

Total in cft ——— 24,61,337

Total earth work cutting tank bund and drains.

in cyd. $\frac{2461337}{27}$ ——— 91,160 cyd.

General Abstract

Items	Cost
Estimate for continuing Kotchatty Chalram Road across Dharmambudha tank including improvements to the tank bed on the garden side including the cost of land acquisition	Rs 63,524
Estimate for lowering and reforming the roads surrounding the Dharmambudha tank with easy approaches towards the other road at junctions.	Rs 23,403
Grand Total Rupees	86,927/

Executive Engineer

16/12/18 City Improvement Trust

For Hon. President

27/6/19

Bangalore City Municipality

City Improvement Duties

Revised Estimate of the probable cost of Continuing Ketchetty Chatram road across and effecting improvements to the surrounding roads of Dharmambudhi tank Bangalore

Amount of Estimate Rs 86927

Plans for Continuing Ketchetty
Chatram Road across Dharmambudhi
Tank Bangalore

Statement showing the existing & proposed gradient of different roads at their junctions with the road on Dharmambudi Tank Bund

Name of roads.	Existing gradients	Proposed gradients.
1. Junction of Subedar Chattram and Balepet roads with the tank bund at south-east corner of the Tank.	1 in 32 1 in 52	1 in 2091
2. Junction of Kemmannagundi and Arlepet roads with the tank bund at south-west corner of the tank.	1 in 33 37	1 in 96.74
3. Junction of Malleswarm and Railway Station roads from under bridge with the Tank Bund at north-west corner of the Tank	1 in 20 5 1 in 21.79 1 in 25.23	1 in 31.14 1 in 36.39
4. Tank Bund running north to south towards the east of the tank.	1 in 243	1 in 254 12

Executive Engineer,
City Improvement Division,
B A N G A L O R E

To Superintending Engineer (Thro' proper channel)
Work done and completed as ordered before dispatch
Sd/-
18/12
Submitted to
Sd/-
18/12

G R. S VI—G/32]

SUBJECT .. ..

. .. .

. .. .

Diary No. of letter replied to 12-19

General and Revenue Secretariat

(2nd)

, the 191

Date of issue 20 6 19

Signed by Asst Dy Narasimhan

Section 2nd

File No. 2-19

Serial No 24

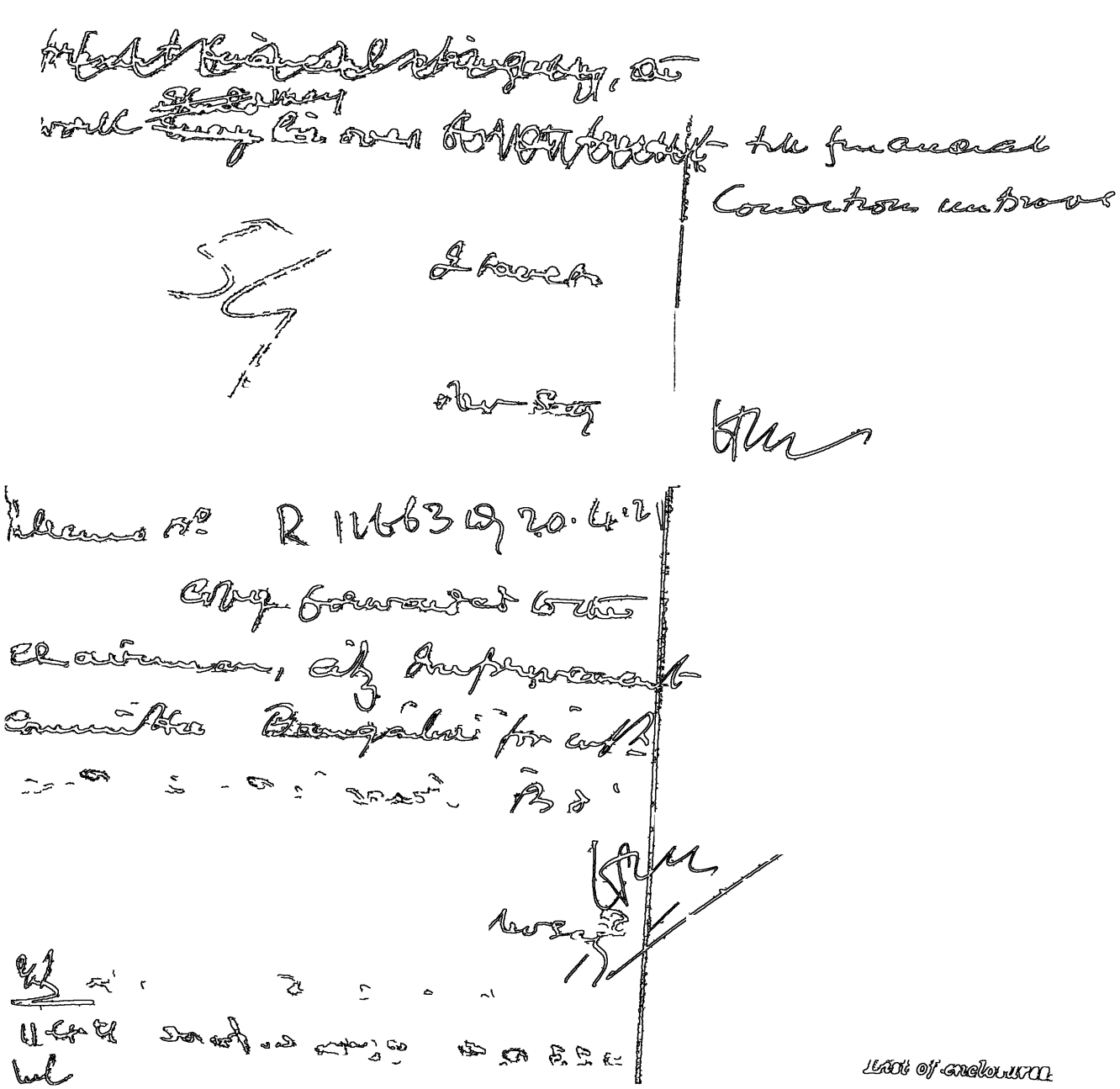
No. R 11662 dy 20 6 19

The President,

Bangalore City Town Muni

Sir,

With ref. to your letter
523/a. dy 25th June 1919 submit
ting for sanction a revised estim
ate amounting to Rs 96,927/- for con
structing the Hutchby Chadram
Road to act as Railway Station
Approach Road & State that Go.
Concurrence to the Estimate



List of enclosures

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